

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

August 27, 2008 Meeting

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Gumpert

Notes: Erin Halton

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the “record” of the meeting, only a reminder for TMT members.

Review of Minutes/Agenda

The 8/1 and 8/6 official meeting minutes/facilitator notes and 8/13 facilitator notes had been posted to the web. No further changes were made to the notes during the meeting and they were considered final. The 8/13 official minutes and 8/22, 25th and 26th official meeting minutes/facilitator notes had not yet been posted to the web; TMT will look to finalize them at the 9/10 TMT meeting.

Autumn Treaty Fishing SOR #2008-C6

Kyle Dittmer, CRITFC, referred TMT to SOR 2008-C6 posted as a link to the TMT agenda. Dittmer reviewed the dates and elevation requests for Bonneville, The Dalles and John Day pools. Cathy Hlebechuk, COE, said that as in the past, the COE would operate Bonneville under a 1.5' hard constraint, The Dalles under a 1.5' soft constraint and John Day under a 1.5' hard constraint. As a follow up to the 8/13 TMT meeting, Dittmer confirmed that the total sockeye catch for the summer treaty fishing season was low compared to the high total numbers; this was likely due to the fishing season start after the peak of the migration.

Action/Next Steps: Dittmer said the COMPACT meeting was scheduled for next week and that there would likely be another SOR on the agenda for the 9/10 TMT meeting.

Dworshak Operations Update

Cathy Hlebechuk, COE, reported that Dworshak outflows were 12.5 kcfs, with Regulating Outlets (RO) 1 and 3 at 1.5' and 2.5' openings, respectively. She added that current forecasts show the project reaching an end of August elevation of 1-1.5' above the 1535' target. Tina Lundell, COE, referred TMT to a thermocline graph posted as a link to the TMT agenda; she noted the current Dworshak tailwater temperature was at 45.9° and the Lower Granite tailwater was at 63.9°, well within desired temperatures.

Dave Statler, Nez Perce Tribe, reported on a draft operational strategy developed by the Dworshak Board for Nez Perce use of the 200 kaf for flow augmentation, per an MOA between The COE/BPA/ID/NOAA and the Nez Perce Tribe are represented on the Dworshak Board. Statler said the strategy was based on the 8/18 STP modeling results and that it may be revised as actual conditions unfold. He noted that this year's strategy

accounts for the higher than average discharge and elevation levels and is more attentive to a gradual step down process. Statler clarified that temperature targets will need to be determined by mid-September, to inform whether the project operates in undershot or overshot mode when the shift is made to a one unit operation. The draft strategy is as follows:

- Draft to 1535', with outflows of ~12.5 kcfs and maintaining the temperature target of 46-48°;
- Then operate at full powerhouse for no less than four days, maintaining the same temperature target;
- Then step down to 7.7 kcfs for no less than four days, maintaining the same temperature target;
- Then step down to 5.4-5.5 kcfs for no less than four days;
- Then step down to 2.5 kcfs, until the elevation 1520' is reached.
- Finally, once the project reaches its 1520' elevation, shift to base flows of approximately 1.5 kcfs.

Action/ Next Steps: Dworshak Operations will be on the agenda for the 9/10 TMT meeting.

Libby/Hungry Horse Operations

John Roache, BOR, reported that Hungry Horse was at an elevation of 3543.35', with outflows of 6.4-6.5 kcfs. He added that the River Forecast Center's 10 day inflow forecast show the project reaching an end of August elevation of around 3541'. The current plan for September is to ramp down to minimum flows, following BiOP ramp rates. Roache noted the Columbia Falls minimum is 3.5 kcfs. Joe Fenolio, COE, reported that Libby was at elevation 2442.3', with inflows of 6 kcfs and outflows of 9 kcfs. Fenolio said the project is in a good position to meet the end of August elevation target of 2441.8', per the Libby/Arrow Swap Agreement. Cathy Hlebechuk, COE, noted that slight adjustments may need to be made to the expected 9 kcfs outflows, per the River Forecast Center's short-term model (RFS), to meet the target elevation.

Action/Next Steps: An update on Libby/Hungry Horse operations will be on the agenda for the 9/10 TMT meeting.

Timing for End of MOP at Ice Harbor, Lower Monumental and Little Goose

Paul Wagner, speaking on behalf of the Salmon Managers, said that guidance for end of MOP will be determined by adult/juvenile presence; given the numbers of juveniles, FPAC consensus was that MOP operations should continue for the near term, with close monitoring of trends. BPA expressed an interest in lifting the MOP restrictions as soon as possible.

Action/Next Steps: TMT members agreed that any recommendation to lift MOP restrictions that arise prior to the next scheduled TMT meeting on 9/10 may be coordinated via email.

Timing for end of MOP at Lower Granite

Paul Wagner, speaking on behalf of the Salmon Managers, reported that the current MOP elevation would support 2 of the collection holding tanks at Lower Granite, but that MOP +1-2' would be needed to support the five additional tanks. He said that when the need for use of the additional tanks arises (when the run picks up), the Salmon Managers would request the operational change through TMT.

Action/Next Steps: TMT members agreed that any developments that arise prior to the next scheduled TMT meeting on 9/10 may be coordinated via email.

Little Goose Spill

Tony Norris, BPA, reported that SOR 2008-6 had been implemented at 1300 hours on 8/26 and was helping with MOP and fluctuation issues experienced during the past week. The project will continue to hold outflows at 11 kcfs until 2400 hours on 8/31. The COE planned to include Little Goose spill as part of their August report to the court. Laura Hamilton, COE, said that there were no TDG issues with this new operation.

Action/Next Steps: TMT will continue to keep a close eye on adult passage at Little Goose through 8/31.

Operations Review

Reservoirs: Dworshak was at elevation 1543.1', with inflows of 2.2 kcfs and outflows of 12.5 kcfs. Libby was at elevation 2442.3', with inflows of 6 kcfs and outflows of 9 kcfs. Seven day average flows at McNary were 127 kcfs (objective was 200 kcfs) and Lower Granite average flows were 26 kcfs (36 kcfs objective.) Grand Coulee was at elevation 1281' and drafting to a target elevation 1280' by the end of August. Hungry Horse was at elevation 3543.35' with outflows in the range of 6.4-6.5 kcfs; the project will likely be at elevation 3541' on 8/31. Banks Lake was at an elevation range of 1565-66' and on track to achieve the end of August elevation target of 1565 feet.

Fish: Cindy LeFleur, WA, reported on adults: counts at Bonneville for Fall Chinook were very strong for this point in the season, as high as 15,000 in a single day. Steelhead were tracking a bit ahead of 10 year averages, with 36,000 Brights and 15,000 Tules counted through 8/25. Paul Wagner, NOAA, reported that subyearling numbers were in the 600-1,000 per day range at Lower Granite, Little Goose and Lower Monumental for the past week. McNary passage was in the 8-10,000 range and Bonneville passage was in the couple thousand per day range.

Power System: Nothing to report at this time.

Water Quality: Laura Hamilton, COE, reported a few exceedances at the Camas/Washougal gauge over the past two weeks and noted that a TDG gauge at John Day is being repaired. Monthly exceedances reports were available othe TMT web page.

Other: Scott Boyd, COE, reported that spill will end at midnight on 8/31 and that the B2 corner collector is scheduled to be closed on 9/1 at 0630 hours.

9/10 Face to Face Meeting

Agenda items will include:

- Finalize notes/minutes
- Autumn Treaty Fishing
- Dworshak September Operations Update
- Libby/Arrow Swap Accounting
- Timing for End of MOP on the Lower Snake
- Lower Granite MOP Operations
- Scheduling for TMT dates in October, November Year End Review
- Operations Review

**Columbia River Regional Forum
Technical Management Team Meeting
Aug. 27, 2008**

1. Introduction

Today's TMT meeting was chaired by Cathy Hlebechuk (COE) and facilitated by Robin Gumpert (DS Consulting) with representatives of BOR, BPA, COE, NOAA, CRITFC, the Nez Perce Tribe, the state of Washington and others participating. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at the meeting. Anyone with questions or comments about these notes should provide them to the TMT chair or bring them to the next meeting.

2. Review of Meeting Minutes

Minutes for Aug. 13, 22, 25 and 26 will be finalized at the next TMT meeting on Sept. 10.

3. Autumn Treaty Fishing

Kyle Dittmer (CRITFC) reported on SOR 2008-C6 which CRITFC submitted to the Action Agencies a week ago. For Aug. 19-22 and Aug. 26-29, the SOR requested a hard constraint of 1 foot on elevation changes at Bonneville, The Dalles and John Day pools. For Sept. 2-6, the SOR requested the same 1-foot band as a hard constraint with specific elevation criteria:

- Bonneville – 76.5-75.5 feet
- The Dalles – 159.5-158.5 feet
- John Day – 264.5-263.5 feet (The COE has been operating the pool at 262.5-264 feet elevation.)

The latest fish forecast is 210,000 adult Chinook and 315,000 adult steelhead at Bonneville. Both predictions are near normal. Tribal harvest for the entire season is expected to be 90,000 fall Chinook and 21,000 steelhead. CRITFC's net flights of the area found 297 nets in the lower pools for this fishery. Of those, 46% were at Bonneville, 14% at The Dalles, and 40% at John Day. These findings adhere to a pattern in recent years of the most nets found in Bonneville pool. As it has for past fisheries, the COE will provide a 1.5 foot hard constraint at Bonneville, a 1.5 foot soft constraint at The Dalles, and a 1.5 foot hard constraint at John Day.

In response to a question from a previous meeting regarding the summer treaty fishery, Dittmer confirmed that the 9,000 count for sockeye is correct. The tribes chose to fish a week after the peak had gone by. Had they fished a week earlier, the catch would probably have doubled.

TMT will revisit treaty fishing on Sept. 10. There could be another SOR and another fishery scheduled by then; CRITFC will let the Action Agencies know as soon as a decision is made.

4. Dworshak Operations

Dworshak is currently releasing 12.5 kcfs with inflows of 2.2 kcfs, Hlebechuk reported. As mentioned during the Aug. 25 TMT call, the COE had stopped spill over the spillways because the water level was below the spillway crest. Since then, the engineering and operations sections of the COE Walla Walla District has approved opening Regulating Outlet #3 by another foot (RO #1 is still at the 1.5-foot setting). The goal is to get Dworshak reservoir down to elevation 1,535 feet by the end of the month. At present, it appears the final elevation will be approximately 0.5-1.5 feet over the mark.

The current temperature is 45.9 degrees F at Dworshak tailwater; 63.9 degrees F at Lower Granite tailwater, Tina Lundell reported. She presented thermocline graphs showing that, as of Monday's predictions, Dworshak tail water temperatures would be between 2006 and 2007 temperatures, if operating in undershot mode. In overshot mode, the temperature range would be 46-48 degrees F, which is cooler than in the past 3 years. The lowest predicted forebay elevation for Sept. 15 is 1,465 feet; the highest is 1,485 feet.

The Dworshak board met yesterday to come up with a strategy for September operations, specifically managing the 200 kaf for the Nez Perce Tribe, Dave Statler (NPT) reported. The board's preference is for gradually decreasing outflows, with incremental steps of no less than 4 days' duration, and the reservoir reaches elevation 1,520 feet by Sept. 30. The strategy to accomplish that involves drafting the reservoir to no lower than elevation 1,535 feet by Aug. 31. When the reservoir reaches elevation 1,535 feet, flows should be reduced, and then reduced again to full powerhouse for approximately 4 days at each step. The next step down should be 7.7 kcfs; then 4 days later, 5.4 kcfs; and finally 2.5 kcfs until elevation 1,520 feet is reached. At that time, the operation goes to base flows of about 1.5 kcfs. At no time would outflows change sooner than every 4 days. The desired outflow temperature range is 46-48 degrees F throughout the operation.

NOAA and COE, speaking as members of the Dworshak board, approved this strategy, which is not complete at this point. If forecasted amounts vary significantly from what is anticipated based on the current water supply, the board will reconvene to adjust its approach.

Under the current strategy, the reservoir could reach elevation 1,535 feet a bit later than the start of operations to manage the 200 kaf for the Nez Perce Tribe. This is the main difference between this year's Dworshak strategy and last

year's. Another important difference: this year the board is more attentive to creating a gradual step-down scenario to avoid the potential for stranding juvenile pacific lamprey.

Asked about preferred water temperatures throughout the operation, Statler said the strategy didn't specify a temperature when operations change to one unit in either undershot or overshot mode. At that time, the Dworshak board will evaluate what is best for the river and the hatchery. Undershot mode would continue to provide 46-48 degrees F water through mid-September according to current projections, Lundell said. Overshot mode would provide temperatures of about 65 degrees. Dworshak operations will be on the Sept. 10 agenda.

5. Libby/Hungry Horse Operations Update

a. Hungry Horse. The current elevation is 3,543.35 feet, with project discharges of 6.4-6.5 kcfs, John Roache (BOR) reported. The current forecasted end-of-August elevation is 3,541 feet based on the River Forecast Center's 10-day inflow forecast. The current plan is to start ramping down towards minimum flows beginning on Sept. 1. It would probably take about a week to get down to minimum flows following the ramping rates. The Columbia Falls minimum flow is currently 3.5 kcfs.

b. Libby. Now at elevation 2,442.3 feet, the project is starting to draft again. Inflows are 6 kcfs, down from 12 kcfs on Aug. 22 and 10 kcfs on Aug. 23. Current outflows are 9 kcfs, projected to last through Aug. 31. The reservoir is in a good position to reach the target elevation of 2,441.8 feet by end August. Joel Fenolio (COE) reminded TMT that the Libby-Arrow swap raised the end of August elevation at Libby by an equivalent of 60 ksfd *above* the normal 2,439 foot target, which is equivalent to elevation 2,441.8 feet. To complete its portion of the swap, Arrow reservoir will release water so as to reach the equivalent of 60 ksfd *below* its normal end of August elevation.

6. Timing for End of MOP Operations at Ice Harbor, Lower Monumental and Little Goose

The Salmon Managers have discussed the usual schedule for this time of year. When juvenile numbers fall and adult numbers rise, typically the lower three Snake River projects – Ice Harbor, Lower Monumental and Little Goose – come off MOP operations. This year, the numbers of juveniles are still quite high, so FPAC agreed to continue current operations. FPAC will monitor the ratio of juveniles to adults. Tony Norris (BPA) requested that MOP restrictions end as soon as they are no longer needed for fish passage because it is less stressful for operators to manage the projects outside of MOP. Ending MOP doesn't necessarily mean refilling the reservoirs, he added.

NOAA, BPA, Washington and the Nez Perce Tribe agreed to communicate via email with regard to monitoring the ratio of juveniles to adults and ending MOP operations. The Salmon Managers will revisit this at their next FPAC meeting.

7. Timing for End of MOP Operations at Lower Granite

In response to a request to look into ending MOP at Lower Granite Dam, Paul Wagner (NOAA) found that there are a total of 7 holding tanks for adult migrants at Lower Granite. The pool needs to be at MOP+1.5 feet in order to provide sufficient water volume to operate all 7 tanks. There are only 2 tanks operating at the current elevation, and the number of fish expected to arrive in the near term is low enough for that to be sufficient. When the run picks up, more tanks will be needed, which will call for a change in pool operations. FPAC will monitor the situation and communicate by email with the Action Agencies if a change is needed before the next TMT meeting Sept. 10.

8. Little Goose Spill

SOR 2008-6 has been implemented, meaning that Little Goose is spilling 11 kcfs continuously to stabilize operations downstream, Norris reported. The steady 11 kcfs flows out of Goose are allowing Lower Monumental to spill 17 kcfs and making it easier to operate the system within the top half foot of MOP at the downstream dams. The spill also solved the navigation problem at Little Goose.

Because this operation deviates from the FOP, it will be included in the report to the court, Lundell said. In response to a question about total dissolved gas, levels are low everywhere on the system except at Camas Washougal gage, Hamilton said. During main passage hours, spill has remained in the 30% range, Wagner noted. FPAC is monitoring the situation to ensure that the spill doesn't negatively impact adult passage.

9. Operations Review

a. Reservoirs. Dworshak is at elevation 1,543.1 feet with inflows of 2.2 kcfs and outflows of 12.5 kcfs. Libby is at elevation 2,442.3 feet, with inflows of 6 kcfs and outflows of 9 kcfs.

Seven day average inflows at Lower Granite are 36 kcfs; the objective is 52.5 kcfs. McNary average flows are 127 kcfs; the objective is 200 kcfs. Grand Coulee is at elevation 1,281 feet, headed towards 1,280 feet by the end of August. Hungry Horse is at elevation 3,543.35 feet, discharging 6.4-6.5 kcfs, with inflows of 1.2-1.6 kcfs. Hungry Horse reservoir is expected to be about a foot above elevation 3540 feet by end August.

b. Fish. The fall Chinook adult count of almost 15,000 fish on Aug. 24 was the highest count for that date back to 1938, Cindy LeFleur (Washington) reported. Yesterday's fall Chinook count was 5,500 fish. Steelhead adult returns are tracking ahead of the 10-year average. Through Aug. 25, that included approximately 36,000 brights and 15,000 tules, which is higher than predicted. Downstream, about 100 adult fall Chinook per day have been passing Ice Harbor dam and about 100 per day at Lower Granite. Steelhead passage is 400 adults per day at Lower Granite. The COE is prepared to raise the forebay level at Lower Granite when needed for trap operations, Rudd Turner said. The Salmon Managers will monitor the situation.

Juvenile passage is happening largely at Lower Granite, where index counts have been 600-1,000 fish per day for the past week. The same has been true at Little Goose and Lower Monumental. When adjusted for passage efficiency, juvenile numbers are still high – 5,000 for Lower Granite; 8-10,000 for McNary; and a few thousand fish per day at Bonneville. Counts were lower at John Day for unknown reasons.

c. Power System. There was nothing to report today.

d. Water Quality. There have been TDG exceedances at Camas-Washougal gage during the last two weeks of August, Hamilton reported. There was also a gage out at John Day tailrace which has been repaired.

The COE is planning to stop spill at midnight, Aug. 31, Scott Boyd reported. The Bonneville 2nd powerhouse corner collector will be turned off at 6:30 am on Labor Day.

9. Next Meeting

The next regularly scheduled TMT meeting will be Sept. 10, 2008. Dworshak operations, the autumn treaty fishery, accounting for the Libby/Arrow swap, the end of MOP operations at Ice Harbor, Lower Monumental and Little Goose, a discussion of needs at Lower Granite, scheduling TMT's year-end review, and the standard operations review will be on the agenda. This summary prepared by consultant and writer Pat Vivian.

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